SECTION 12 61 13

FIXED AUDIENCE SEATING

PART 1 GENERAL

1.01 PROJECT SCOPE

A. The following is to be bid as Additive Alternate No. 1
   1. Removal and disposal of existing 246 theater chairs. Coordinate disposal/recycling effort of existing seats with Owner representative. A City designated arts agency will reuse the existing seating.
   2. Break and patch anchors.
   3. Deliver and install approximately 246 fixed new padded and upholstered chairs as specified, floor mounted, with self-lifting seat which rises to a uniform 3/4 safety fold position.

1.02 PERFORMANCE REQUIREMENTS

A. Commence order of Seating NLT February 6, 2012.

B. Removal of existing seating commence by June 22, 2012 and complete by June 27, 2012.

C. Commence installation of seating NLT July 9, 2012.

D. Substantial completion by July 16, 2012.

E. Punch List Review on July 20, 2012.

F. Corrective actions completed by July 25, 2012.

1.03 DELIVERY, STORAGE, AND HANDLING.

A. Deliver/Pick-up of seating is allowed after 6pm or on weekend for free parking at City Hall.

B. Deliver/Pick-up of seating is allowed during normal business hours when a street closure permit for Commerce Street is required.

C. No vehicles are allowed in Trevino Alley.

1.04 QUALIFICATIONS

A. Installer: Company specializing in performing the work of this specification with a minimum of 5 years experience.

B. Subcontractors shall meet SBEDA goals established in respondent contract.

1.05 MAINTENANCE

A. Submit maintenance data for fabric cleaning.

1.06 SUBMITTALS:

A. Product data for each chair model specified to include construction details, material descriptions and finish options

B. LEED:
   1. Product data for MR Credit 4 documenting recycled content.

C. Seating layout (shop drawings) developed from the contract drawings which show aisle widths, chair spacing for each row, row-lettering and chair-numbering scheme, chair dimensions and back pitch. Layout drawings to also include locations for accessories, including left- and right-hand tablet arms, electrical devices, accessibility provisions and attachments to other work.

D. Samples for verification & finish selection to include:
   1. Final powder coat selection to be approved from manufacturers standard-sized samples not less than 1” x 3”.
   2. Final plastic color selection to be approved from manufacturers standard-sized samples not less than 2” x 3”.

3. Final wood finish selection to be approved from manufacturers standard-sized samples not less than 4” x 3”.
4. Final upholstery fabric selection to be approved from fabric mills standard swatch size if available.

E. Maintenance instructions and inspection guidelines furnished for each chair model specified.

F. Manufacturers standard warranty for seating and fabrics.

1.07 QUALITY ASSURANCE

A. Source Limitations:
1. Obtain each type of fixed seating required, including accessories and mounting components, from a single manufacturer.
2. Obtain fabric of a single dye lot for each color and pattern of fabric required except when yardage requirement exceeds maximum dye lot. Multiple dye lots shall be color matched for quality assurance.

B. Fire Performance Characteristics of Upholstered Seating:
1. Fabric shall be Class 1 according to DOC CS 191 and 16 CFR 1610.61, tested according to California Technical Bulletin 117.
2. Padding shall comply with California Technical Bulletin 117.

C. Build sample chairs for each model required to demonstrate aesthetic effects and set quality standards for fabrication.

PART 2 PRODUCTS

2.01 AUDITORIUM SEATING COMPONENTS

A. Basis of Design: Irwin Seating Company Model: 81.6.17.4 Oriental

B. Source:
Kirk Worthington
Worthington Contract Furniture, L.P.
13740 Research Blvd. Bldg. K, Suite 7, Austin, TX 78750
512-331-1628

2.02 MATERIALS AND FINISHES:

A. Steel shall meet requirements for ASTM A 36/A 36M plates, shapes, and bars; ASTM A 513 mechanical tubing; ASTM A 1008/A 1008M cold-rolled sheet; and ASTM A 1011 hot-rolled sheet and strip.

B. Cast Iron shall meet requirements for ASTM A 48/A 48M, Class 25, gray iron castings free of blow holes and hot checks with parting lines ground smooth.

C. Cast Aluminum shall meet requirements for ASTM B 85 aluminum-alloy die castings.

D. All exposed metal parts shall be powder coated with a hybrid thermosetting powder coat finish. The powder coat finish shall be applied by electrostatic means to a thickness of 2 - 5 mils, and shall provide a durable coating having a 2H Pencil hardness. Prior to powder coating, metal parts shall be treated with a three-stage non-acidic, bonderizing process for superior finish adhesion, and after coating shall be oven baked to cause proper flow of the epoxy powder to result in a smooth, durable finish. Manufacturer's standard color range shall be used.

E. Medium-density fiberboard shall meet requirements for ANSI A208.2, Grade MD, made with binder containing no urea formaldehyde.

F. Concealed plywood shall meet requirements for HPVA HP-1 hardwood plywood.

G. Exposed plywood shall meet requirements for HPVA HP-1, Face Grade A, hardwood veneer core with color-matched hardwood-veneer faces, made with adhesive containing no urea formaldehyde.

H. Hardwood lumber and veneer faces shall be Maple selected to be free of visible defects. Exposed wood shall be sanded smooth and stained to color selected with low-VOC water-based stain and top coat to provide with a high quality finish. Color to be chosen from manufacturer's standard offering.

I. The fabric selections are a combination.
   1. Maharam 246 seats and 196 backs.
      a. Pattern - Chance 464010
      b. Color - 001 Harvest
      c. Finish Backing - Cypton
      d. Width - 54”
      e. Source:
         Maharam
         2811 McKinney Avenue Suite #20
         Dallas, TX 75204
         214-741-1567
         800-645-3943
   2. Designtex for 50 seat backs only.
      a. Pattern - Bunta 3360-101
      b. Color - Orleander
      c. Finish Backing - Acrylic
      d. Width - 54”
      e. Source:
         Designtex
         1617 Hi Line Dr. #410
         Dallas, TX 75207
         214-742-4446
         800-221-1540
   3. Further, it is required that fabric shall meet Class 1 flammability requirements of the U.S. Department of Commerce Commercial Standard 191-53 per Bulletin #117 (California Code).

J. Upholstery padding shall be molded or slab polyurethane foam.

K. Molded Plastics:
   1. Structural components shall be mar and dent resistant high density glass-filled polypropylene with UV stabilizers.
   2. Decorative components shall be mar and dent resistant high density polyethylene (HDPE) with UV stabilizers.
   3. Plastic components shall be chosen from manufacturer's standard offering.

2.03 FIXED AUDIENCE SEATING:

A. Permanent arrangement of fixed audience seating as shown on seating layout drawings.
   1. Approved manufacturers subject to compliance with requirements outlined herein.
   2. Basis-of-design for fixed audience seating is 81.612.17.4 Oriental

B. Chair support columns shall be a formed 14 gauge (.0747") steel tube with an integral back wing plate. Column shall exhibit a 10° rearward incline to help conceal back attachment hardware. Brackets for seat attachment shall be 7 gauge (.1875") steel for superior strength, formed with an integral support buttress. Floor attachment foot shall be formed from 12 gauge (.105) steel to 7-1/2” x 2-5/8” in size. All steel components shall be robotic welded for precise assembly and exceptional integrity. The standard shall be fabricated to be compatible with the floor incline, and to maintain proper seat and back height and angle.

C. Aisle end panels shall be rectangular-shaped with a radiused bottom edge, constructed of medium density fiberboard (MDF) with a block front and surfaced with wood veneer stained with a clear lacquer finish. Panels shall be provided with a seat bracket recess for precise location and support of the panel. Panel is secured to a 14 gauge formed steel bracket bolted to the top of the support column and directly to the support column with the use of a spacer. Panel bracket assembly is concealed behind a steel shroud attached with a tamper resistant screw.

D. Chair back components shall be padded and upholstered on the face with a border around the upholstery panel to reveal the rear "designer" panel surfaced with hardwood veneer. Rear panel is to be attached to the upholstery panel with concealed fasteners so there is no exposed hardware. The rectangular backs shall be fabricated with a lateral radius for comfort and notched corners. Assembled chair shall have a nominal back height of 33”. The back assembly shall be certified through routine ISO testing to withstand a 250 lb. static load test applied approximately 16” above the seat assembly and a 100,000 cycle 40 lb. swing impact test.
   1. The upholstery panel shall be 5-ply, 7/16" thick hardwood plywood, and padded with 2" thick polyurethane foam cemented to the panel. A 1-piece fabric cover shall be securely fastened to the hardwood inner panel by means of upholstery staples to facilitate ease of reupholstering. Wings used for the attachment of the complete back assembly to the standards shall be not less than 14 gauge (.0747") steel. Wings shall be firmly secured to the inner panel through the use of threaded t-nuts fastened to the inner panel.
   2. The rear of the back shall be enclosed by a "designer" panel fabricated of 9-plies of 1/16” thick hardwood veneer, providing sufficient mass of the decorative panel and providing an attractive, measured, even appearance of the exposed edges. Decorative rear panels shall be formed on the same radius as the upholstered panels, and shall be securely mounted to the upholstery panel using concealed fasteners. There shall be no exposed screws, mounting brackets or hardware on the rear of the back. The rear surface of the back shall be class A hardwood veneer of the species selected, and finished per specifications. The rear panel shall be of sufficient length to protect the chair seat from the rear, and the forward face of the minimally exposed lower portion of the rear panel shall be allowed to be interior grade veneer, stained the appropriate color and coated with a single coat of lacquer.

E. Padded and upholstered seats shall automatically self-lift to a 3/4 fold position when unoccupied. The mechanism shall be certified through routine ISO testing to exceed 100,000 cycles during ASTM Designation F851-87 Test Method for Self-Rising Seat Mechanism. In addition, the seat shall withstand as a 600 lb. static load test applied approximately 3” from the front edge of the seat assembly and a 50,000 cycle 125 lb. vertical drop impact test.
   1. Seat foundation pan shall be 20 gauge, deep-drawn die-formed steel, completely enclosing the self-lifting hinge mechanism. The seat pan shall be strengthened by a full 360 degree roll around the perimeter for rigidity, and have decorative embossing for basic strength. Further, the foundation pan shall have internal reinforcing consisting of steel doubler plates and formed angular steel lateral braces. The foundation pan shall be free of screws and bolts on the bottom, front, sides and rear.
   2. The seat shall rotate on two self-compensating, fully independent, 5/8" diameter, high strength, solid steel hinge rods. Seat-lift shall be accomplished by a 13 gauge extension springs, providing quiet gentle seat uplift. Seat lift shall be dampened by durable, soft rubber cushioned up-stops. Smooth, effortless operation of the hinges shall be assured by self-lubricating nylon shoulder bushings. When unoccupied, the seat shall quietly and automatically rise to a 3/4 fold position, and upon a slight rearward pressure, shall achieve full-fold, allowing the patron additional passing room. Down-stops shall be rubber cushioned for quiet operation.
   3. The seat cushion shall have a base structure of five serpentine springs spanning a 14 gauge steel frame, formed to a channel, welded for precision fit into the steel foundation pan. Serpentine springs shall be secured to the frame by insulated squeak-proof clips.
   4. A tough, durable, non-woven, non-vegetable chafing barrier is to be placed between the serpentine springs and the polyurethane cushion to protect the foam. The resilient 3” thick molded cushion shall have an extended front for a waterfall leading edge. Fabric cover shall be of panel-side construction and secured around the perimeter of the cushion frame by case hardened spring clips which permit ease of re-upholstery. The seat cushion assembly shall be securely locked into the seat pan by positive, high strength spring clips which prevent unauthorized removal of cushions, yet can be quickly removed from the seat foundation without removal of screws or bolts.

F. Chair width shall vary to accommodate sightlines and row lengths.

G. Back height and pitch shall be fixed as shown on seating layout drawings.

H. Center standards shall be provided with a glass-filled polypropylene armrest support structure capable of surpassing a 200 lb. vertical static load test applied 3” from the front edge of the armrest. Armrest support shall be attached to the support column with an integral ribbed post that binds into the steel support column and locked in place with a concealed security screw. Support structure is capped with a curved solid wood armrest attached with concealed hardware. Aisle end armrests are to be attached to the 14 gauge aisle panel bracket with concealed hardware.

I. Row-lettering and chair-numbering shall be provided for identification of all chairs as shown on approved seating layout drawings. Number plates shall be 5/8" x 1-5/8" aluminum with a bronze finish and black sans serif numerals. The seat pans shall be recessed at the center of the front edge for the number plates, and attached by two (2) pop rivets. Letter plates shall be 5/8" x 1-5/8" with a bronze finish and black sans serif numerals attached in recess of aisle standard armrest by two (2) pop rivets. Attaching hardware shall have a finish compatible to plates.

J. Accessible Seating:
   1. Shall be designated on the seating layout drawings and designed to allow an individual to transfer from a wheelchair to the theatre chair. The aisle standard shall be equipped with an armrest capable of lifting to a position parallel with the support column, opening sideways access to the seat. Aisle standards so equipped shall be provided with a label, displaying an easily recognizable "handicapped" symbol. Decorative requirements of aisle standards are waived for the handicapped access standards.

K. Furnish extra materials from the same production run that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
   1. Furnish 3 seat and back fabric covers.
   2. Furnish 3 spare arms.

2.04 FABRICATION:

A. Manufacture fabric-covered cushions with molded padding beneath fabric and with fabric covering free of welts, creases, stretch lines, and wrinkles. For each upholstered component, install pile and pattern run in a consistent direction.

B. Fabricate floor attachment plates to conform to floor slope, if any, so that standards are plumb and chairs are maintained at same angular relationship to vertical throughout project.

2.05 WARRANTY:

A. Provide a manufacturer's warranty covering the material and workmanship for the specified warranty period from date of final acceptance.

B. Warranty Periods:
   1. Structural Components: five years.
   2. Operating Mechanisms: five years.
   3. Plastic, Wood and Painted Components: five years.
   4. Upholstery Fabric: one year.

PART 3 EXECUTION

3.01 INSPECTION

A. Verify that site conditions are ready to receive work and dimensions are as indicated on shop drawings.

B. Beginning of installation means acceptance of existing surfaces and conditions.

3.02 EXAMINATION

A. Prior to layout and installation examine floors, risers, and other adjacent work and conditions, with Installer present, for compliance with requirements and other conditions affecting performance of the work including, but not limited to, plumb of riser faces and concrete conditions.

B. Examine locations of electrical connections.

C. Examine locations of HVAC supply ducts.

D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.03 INSTALLATION

A. Install seating in locations indicated and fastened securely to substrates according to manufacturer's written installation instructions.

B. Use installation methods and fasteners that produce fixed audience seating assemblies with individual chairs capable of supporting an evenly distributed 600-lb static load applied 3” from front edge of the seat without failure or other conditions that might impair the chair's usefulness.

C. Install seating with chair end standards aligned from first to last row and with backs and seats varied in width and spacing to optimize sightlines.

D. Install riser-mounted attachments to maintain uniform chair heights above floor.

E. Install chairs in curved rows at a smooth radius.

F. Install seating so moving components operate smoothly and quietly.

G. Install wiring conductors and cables concealed in components of seating and accessible for servicing.

H. Include the removal of the existing seating as part of the scope of work.

3.04 FIELD QUALITY CONTROL

A. Perform tests and inspections.

B. Prepare test and inspection reports.

3.05 ADJUSTING

A. Adjust chair backs so that they are properly aligned with each other.

B. Adjust self-rising seat mechanisms so seats in each row are aligned when in upright position.

C. Verify that all components and devices are operating properly.

D. Repair minor abrasions and imperfections in finishes with coating that matches factory-applied finish.

E. Replace upholstery fabric damaged during installation.

END OF SECTION